

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A method for testing and improving the performance of a speech recognition engine, comprising:

loading into a memory location one or more spoken words, phrases or utterances of plural grammar types;

identifying one or more of the spoken words, phrases or utterances for recognition by a speech recognition engine;

categorizing the identified one or more words, phrases or utterances by grammar type whereby all words, phrases or utterances of [[a]]the same grammar type are grouped together in a grammar sub-tree;

selecting a particular grammar sub-tree;

extracting the one or more spoken words, phrases or utterances in a from the selected grammar sub-tree via a vocabulary extractor module, and[[,]] passing the extracted one or more identified words, phrases or utterances to a text-to-speech conversion module that provides an audio formatted pronunciation of each word, phrase, or utterance in the selected grammar sub-tree;

passing the audio pronunciation of each of the identified one or more words, phrases or utterances, grouped in the selected grammar sub-tree, from the text-to-speech conversion module to the speech recognition engine;

creating a recognized word, phrase or utterance for each audio pronunciation passed to the speech recognition engine; and

analyzing each recognized word, phrase or utterance created by the speech recognition engine from the selected grammar sub-tree to determine how closely each created recognized word, phrase or utterance approximates the respective audio pronunciation from which each created recognized word, phrase or utterance is derived[[.]]; and

assigning a confidence score to each recognized word, phrase or utterance associated with confidence of the speech recognition engine that the output is a correct representation of the audio pronunciation received by the speech recognition engine.

2. (Cancelled)

3. (Currently Amended) The method of Claim [[2]]1, whereby assigning the confidence score to each recognized word, phrase or utterance is based on a confidence level associated with the each recognized word, phrase or utterance based on prior speech recognition engine training.

4. (Previously Presented) The method of Claim 3, whereby assigning the confidence score to each recognized word, phrase or utterance is based on the confidence level with which the speech recognition engine determines that each recognized word, phrase or utterance is the same as each respective word, phrase or utterance from which each recognized word, phrase or utterance is derived by the speech recognition engine based on prior speech recognition engine training.

5. (Currently Amended) The method of Claim [[2]]1, whereby if the confidence score exceeds an acceptable confidence score threshold level, designating the recognized word, phrase or utterance associated with the confidence score as being accurately recognized by the speech recognition engine.

6. (Original) The method of Claim 5, whereby if the confidence score is less than an acceptable threshold, modifying the speech recognition engine to recognize the word, phrase or utterance from which the recognized word, phrase or utterance is derived with higher accuracy.

7. (Original) The method of Claim 5, whereby if the confidence score is less than an acceptable confidence score threshold level, notifying a speech recognition engine developer.

8. (Original) The method of Claim 6, whereby modifying the speech recognition engine includes altering the audio pronunciation of the word, phrase or utterance associated with the confidence score that is less than an acceptable confidence score threshold level such that the

altered audio pronunciation obtains an acceptable confidence score upon a next pass through the speech recognition engine.

9. (Original) The method of Claim 6, whereby modifying the speech recognition engine includes reducing the acceptable confidence score threshold level.

10. (Original) The method of Claim 1, after analyzing each recognized word, phrase or utterance, determining whether each recognized word, phrase or utterance is the same as a respective word, phrase or utterance from which the recognized word, phrase or utterance is derived.

11. (Original) The method of Claim 10, whereby if any recognized word, phrase or utterance is the same as the respective word, phrase or utterance from which the any recognized word, phrase or utterance is derived, designating the any recognized word, phrase or utterance as being accurately recognized by the speech recognition engine.

12.-14. (Cancelled)

15. (Previously Presented) The method of Claim 1, whereby a plurality of grammar sub-trees are grouped together to form a grammar tree containing all of the one or more words, phrases or utterances.

16. (Previously Presented) The method of Claim 1, whereby identifying one or more words, phrases or utterances for recognition by the speech recognition engine includes selecting the grammar sub-tree containing the one or more words, phrases or utterances.

17. (Original) The method of Claim 1, whereby creating a recognized word, phrase or utterance for each respective audio pronunciation includes converting each respective audio pronunciation from an audio format to a digital format by the speech recognition engine; and

analyzing phonetically each audio pronunciation of each of the one or more words, phrases or utterances to create the recognized word, phrase or utterance for each respective audio pronunciation.

18.-21. (Cancelled)

22. (Currently Amended) A method for testing and improving the performance of a speech recognition engine, comprising:

identifying one or more spoken words, phrases or utterances for recognition by the speech recognition engine;

categorizing the one or more identified words, phrases, or utterances by grammar type where all words, phrases or utterances of a same grammar type are grouped together in a grammar sub-tree;

selecting a particular grammar sub-tree;

creating and passing an audio pronunciation of each of the identified one or more spoken words, phrases or utterances in [[a]]the selected grammar sub-tree from a text-to-speech conversion module that provides an audio formatted pronunciation of each of the identified words, phrases or utterances in the selected grammar sub-tree to the speech recognition engine;

deriving a recognized word, phrase or utterance for each audio pronunciation passed to the speech recognition engine;

assigning a confidence score to each derived_recognized word, phrase or utterance based on the speech recognition engine's confidence in each derived_recognized word, phrase or utterance based on prior training of the speech recognition engine to recognize similar or same words, phrases or utterances as each derived_recognized word, phrase or utterance; and

if the confidence score is less than an acceptable threshold, modifying the speech recognition engine to recognize with higher accuracythe word, phrase or utterance from which the derived_recognized word, phrase or utterance is derived.

23. (Original) The method of Claim 22, whereby modifying the speech recognition engine includes altering the audio pronunciation of the word, phrase or utterance associated with the confidence score that is less than an acceptable confidence score threshold level such that the altered audio pronunciation obtains an acceptable confidence score upon a next pass through the speech recognition engine.

24. (Original) The method of Claim 22, whereby modifying the speech recognition engine includes reducing the acceptable confidence score threshold level.